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Gregory J. May

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

MOON, SEOKYUN

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

07/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/665,831

Applicant(s)

MAY, GREGORY J.

Examiner

Seokyun Moon

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Remark

1. In the previous Office Action, the Examiner allowed claims 1-24 and 35 and objected claims 31-33. However, during the examination process of newly amended claims, the Examiner has found out that some of the original claims have 112 issues as being inconsistent with the specification of the current Application and as being indefinite for failing to distinctly claim the invention of the current Application.

In view of the foregoing remark, this correspondence will be sent out as a Non-Final Rejection.

Also, as indicated in the previous Office Action, the subject matter of the current Application might be different and distinguishable from the disclosed prior arts. However, Examiner respectfully submits that the Applicants have failed to disclose such subject matter in the claims, adequately.

Claim Objections

2. **Claim 7** is objected to because of the following informalities: “*a bands*” [line 3].

For further examination purpose, “*a*” will be omitted.

Appropriate correction is required.

3. **Claim 13** is objected to because of the following informalities: “*each pixel is one of multiple colors*” [line 2] and “*each the multiple colors*” [lines 4-5].

For further examination purpose, the claim limitations will be interpreted as “*each pixel has one of multiple colors*” and “*each of the multiple colors*”.

Appropriate corrections are required.

4. **Claim 30** is objected to because of the following informalities: “*alternating polarization*”.

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Claim 26 on which claim 30 depends discloses, “*alternating polarization of said emission*”. It is not clear whether the term, “*polarization*” disclosed in claim 30 refers to the claim limitation, “*polarization*” disclosed in claim 26 or not.

For further examination purpose, the claim limitation will be interpreted as “*alternating the polarization*”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 1-24** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to **claim 1**, the claim discloses, “*said plurality of receptors activating said pixels depending upon which, if any, of the plural polarizations is received*” [claim 1 lines 10-11]. However, according to the specification of the current Application [pg 12 lines 19-23], the plurality of receptors activates the pixels only when the polarizations of the polarization filters of the receptors are matched to the polarizations of the emissions. In other words, the plurality of receptors do not activate the pixels when emissions having plural polarizations is received, if the polarizations of the polarization filters of the receptors are not matched to the polarizations of the emissions.

Appropriate correction or explanation is required.

As to **claims 2-24**, the claims are rejected as being dependent upon a 112-rejected base claim.

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7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1-37** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to **claim 1**,

i) the claim [claim 1 lines 3-4] discloses, “*emissions having plural polarizations defining a corresponding number of color channels*”.

However, Examiner respectfully submits that the polarizations do not define a number of color channels.

For further examination purpose, the claim limitation will be interpreted as “*emissions having plural polarizations, wherein the number of the polarizations defines a corresponding number of color channels*”, as best understood by the Examiner.

ii) the claim [claim 1 lines 10-11] discloses, “*said plurality of receptors activating said pixels depending upon which, if any, of the plural polarizations is received*”.

However, Examiner respectfully submits that the polarizations are merely characteristics of the emissions and cannot be subjects being received.

For further examination purpose, the claim limitation will be interpreted as “*said plurality of receptors activating said pixels depending upon which, if any of the emissions having plural polarizations is received*”, as best understood by the Examiner.

As to **claims 2, 3, 20, and 24**, the claims disclose, “*emissions of plural polarizations*”

However, Examiner respectfully submits that “*polarizations*” are merely characteristics of the emissions and cannot be subjects being emitted.

For further examination purpose, the claim limitation, “*emissions of plural polarizations*” will be interpreted as “*emissions having plural polarizations*”, as best understood by the Examiner.

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As to **claim 5**, the claim discloses, “*to sequentially polarize said emissions through the multiple polarization phases*”.

However, Examiner respectfully submits that “*the multiple polarization phases*” are merely characteristics of the segments of the multi-segment filter.

For further examination purpose, the claim limitation will be interpreted as , “*to sequentially polarize said emissions through the segments of the multi-segment filter having the multiple polarization phases*”.

As to **claim 7**, the claim discloses, “*wherein different ones of said multiple colors are encoded by bands near different ones of said multiple polarization phase peaks*”.

However, Examiner respectfully submits that “*bands*” cannot be a means for encoding the multiple colors.

For further examination purpose, the claim limitation will be interpreted as “*wherein different ones of said multiple colors are encoded within bands near different ones of said multiple polarization phase peaks*”.

As to **claim 16**, the claim discloses, “*each of said receptors is positioned adjacent receptors responsive to bands near different ones of said multiple polarization phase peaks*”.

However, Examiner respectfully submits that the receptors are not responsive to the bands but are responsive to the emissions polarized with respect to the bands.

For further examination purpose, the claim limitation will be interpreted as “*each of said receptors is responsive to the emissions polarized with respect to bands near different ones of said multiple polarization phase peaks*”.

As to **claims 25 and 31-34**, the claims include a phrase, “*emissions of different polarizations*”.

However, Examiner respectfully submits that “*polarizations*” cannot be a subject being emitted. Polarization is merely one of various characteristics of a material.

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As best understood by the Examiner, the claim limitation, “*emissions of different polarizations*” will be interpreted as “*emissions having different polarizations*” for further examination purpose.

As to **claim 35**, the claim discloses, “*emissions of multiple polarization states*”.

However, Examiner respectfully submits that “*polarization states*” cannot be a subject being emitted. Polarization is merely one of various characteristics of a material.

As best understood by the Examiner, the claim limitation, “*emissions of multiple polarization states*” will be interpreted as “*emissions having multiple polarization states*” for further examination purpose.

As to **claim 36**, the claim discloses, “*emissions of plural polarization states*”.

However, Examiner respectfully submits that “*polarization states*” cannot be a subject being emitted. Polarization is merely one of various characteristics of a material.

As best understood by the Examiner, the claim limitation, “*emissions of plural polarization states*” will be interpreted as “*emissions having plural polarization states*” for further examination purpose.

As to **claim 36**, the claim discloses, “*emissions of a plurality of polarizations*”.

However, Examiner respectfully submits that “*polarizations*” cannot be a subject being emitted. Polarization is merely one of various characteristics of a material.

As best understood by the Examiner, the claim limitation, “*emissions of a plurality of polarizations*” will be interpreted as “*emissions having a plurality of polarizations*” for further examination purpose.

As to **claims 4, 6, 8-15, 17-19, 21-23, and 26-30** are rejected as being dependent upon 112-rejected base claims.

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Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 25-30, 34, and 36** are rejected under 35 U.S.C. 102(b) as being anticipated by Naito (US 6,356,251).

As to **claim 25**, Naito teaches a method of encoding color data to activate an optically addressable display [abstract lines 1-4] including a plurality of pixels [col. 3 lines 41-45], the method comprising the steps of:

at a projection device:

producing emissions of light having different polarizations [col. 16 lines 35-45];

for each pixel, applying data to each of the emissions of light having different polarizations by selectively passing the emissions of light having different polarizations to the pixels (the light emitted through the “*polarizing plates 49d*” activates the “*light-receiving elements 49a*” only when the polarization of the emitted light is matched to the polarization of the “*polarizing plates 49b*”) [col. 16 lines 18-22];

at each pixel,

responding to each of the emissions of light having different polarizations with a corresponding receptor (“*light-receiving element 49a*”); and

producing a different display for each of the emissions of light having different polarizations when responded to by the corresponding receptor [col. 10 lines 37-44].

As to **claim 26**, Naito teaches the step of producing comprises:

generating an emission of light in a visible or non-visible spectrum [col. 9 lines 15-20]; and

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alternating polarization of the emission (the polarization axes of the polarizing plates of the first and third light-emitting elements are orthogonal to the polarization axes of the polarizing plates of the second and fourth light-emitting elements) [col. 16 lines 36-45].

As to **claim 27**, Naito teaches generating step comprising generating a laser emission [col. 9 lines 18-20].

As to **claim 28**, Naito teaches the alternating step comprising filtering the emission (filtering and polarizing the emitted light using “*polarizing plates 49d*”) [fig. 20].

As to **claim 29**, Naito teaches the alternating step comprising filtering the emission through one of a multiple-segment and liner filter (note that the polarizations of each of the two consecutive polarizing plates are orthogonal to each other and thus each of the polarizing plates is a single-segment filter) [col. 16 lines 36-45].

As to **claim 30**, Naito teaches the alternating step comprising alternating polarization between one of multiple different phases (the polarizations of each of the two consecutive polarizing plates are orthogonal to each other) [col. 16 lines 36-45].

As to **claim 34**, Naito teaches that the step of applying data applies data to the emissions of light having different polarizations sequentially (note that as the light-emitting elements output modulated beams as optical data signals sequentially, the beams are filtered out sequentially by the polarizing plates located on the light-receiving elements and used as driving signals for scanning electrodes) [col. 5 line 63 – col. 6 line 2].

As to **claim 36**, Naito teaches an optically addressable display [abstract lines 1-4] comprising:
a projection device [fig. 20], including:

means (“*light emitting diodes 49c*”) for directing emissions of light having plural polarization states [col. 16 lines 36-45] toward an array of pixels; and

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means ("*polarizing plate 49b*") for selectively passing emissions of light having each of the plural polarization states according to applied data (light emitted from different light emitting elements are differently polarized); and

at each pixel,

receptor means ("*light-receiving element 49a*") responsive to each of the plural polarization states; and

means ("*scan electrode driving circuits 41c*") for actively producing plural color displays, one for each of the plural polarization states.

As to **claim 37**, Naito teaches an optically addressable display [abstract lines 1-4] comprising:

at each pixel,

means ("*polarizing plate 49b*") [fig. 20] for receiving emissions having a plurality of polarizations [col. 16 lines 18-22], each of the plurality of polarizations corresponding to a separate color data channel wherein data is encoded onto each of the separate color data channels (light emitted from different light emitting elements are differently polarized) [col. 16 lines 36-45]; and

means ("*scan electrode driving circuits 41c*") for actively producing plural color displays, one for each of the plurality of polarizations having received emissions.

Specification

11. Specification is objected to because of the following matters: emissions of polarizations

As discussed with respect to the rejections of the claims under 35 U.S.C. 112 2nd paragraph, the Examiner respectfully requests the Applicants to revise the specification including "*emissions of polarizations*" as "*emissions having polarizations*".

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Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (572) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 20, 2007

- s.m.



SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER